

PATENT APPLN. NO. 10/544,210
RESPONSE UNDER 37 C.F.R. §1.111

PATENT
NON-FINAL

REMARKS

Claim 19 has been amended to recite that: 1) the lithium transition metal oxide of the positive active material is lithium cobaltate, 2) Zr is contained in the positive active material as a Zr compound in the form of particles adhered to the surface of the lithium cobaltate, and 3) Mg is contained in both of the Zr compound particles and the lithium cobaltate particles.

Limitation 1) is supported by original claim 7. Limitation 2) is supported by original claims 2, 3 and 5. Limitation 3) is supported by the description on page 26, lines 22 - 24.

A new dependent claim depending on claim 19 and reciting that at least 80 % of the lithium cobaltate particle surface is exposed without being covered with the Zr compound particles has been added to the application. The new dependent claim is supported by the description on page 26, lines 19 - 20.

Referring to the Action, claims 19, 21 and 23 are rejected under 35 U.S.C. § 102(b) as being anticipated by Yamazaki "(machine translation for JP 2002-358963 as found in IDS dated 02/16/2010)". (Action, page 3, line 7). Claim 24 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamazaki in view of Tanaka (US 5,487,960). Claim 25 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamazaki in view of Hironaka et al. (US

PATENT APPLN. NO. 10/544,210
RESPONSE UNDER 37 C.F.R. §1.111

PATENT
NON-FINAL

2001/0031391).

Yamazaki does not anticipate and, in fact, teaches away from a nonaqueous electrolyte secondary battery comprising a positive electrode containing a positive active material as recited in the claims of the application which comprises lithium cobaltate and Zr, the Zr being contained as a Zr compound in the form of particles adhered to the surface of said lithium cobaltate.

Yamazaki discloses that "ZrO₂ does not remain in the form separated with the lithium cobalt system multiple oxide" (paragraph [0032]) and that "[i]n lithium cobalt system multiple oxide concerning this invention, since Zr has replaced Co site in a lithium cobalt system multiple oxide uniformly and neither ZrO₂ nor Li₂ZrO₃ exists substantially" (paragraph [0033]). Therefore, limitation 2) of the present invention is not inherent in the nonaqueous electrolyte secondary battery of Yamazaki. Yamazaki teaches away the present invention.

Yamazaki also fails to disclose or suggest limitation 3), i.e., Mg contained in both Zr compound particles and lithium cobaltate particles of a nonaqueous electrolyte secondary battery.

Finally, an unexpected result is obtained by limitation 3). The unexpected result is that the particles of the Zr compound adhere more firmly to the surface of the lithium cobaltate to

RECEIVED
CENTRAL FAX CENTERPATENT APPLN. NO. 10/544,210
RESPONSE UNDER 37 C.F.R. §1.111

DEC 27 2010

PATENT
NON-FINAL

improve cycle characteristics. (page 27, lines 19- 25 of the specification).

Removal of the 35 U.S.C. § 102 and 35 U.S.C. § 103(a) rejections and an allowance of the present application are believed to be in order and are respectfully requested.

The foregoing is believed to be a complete and proper response to the Office Action dated September 27, 2010.

In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to our Deposit Account No. 111833.

In the event any additional fees are required, please also charge our Deposit Account No. 111833.

Respectfully submitted,

KUBOVCIK & KUBOVCIK



Ronald J. Kubovcik
Reg. No. 25,401

Crystal Gateway 3
Suite 1105
1215 South Clark Street
Arlington, VA 22202
Tel: (703) 412-9494
Fax: (703) 412-9345
RJK/ff